Mary Nichols, Chair  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812

Re: Triennial Investment Plan Update--Draft Concept Paper

Dear Ms. Nichols:

The Transportation Solutions Defense and Education Fund, TRANSDEF, is an environmental non-profit advocating for the regional planning of transportation, land use and air quality, with a focus on climate change. We strongly support ARB's efforts to design programs to achieve the state's GHG emissions reduction targets. We are proud that California wants to demonstrate to the world how to do it. We hope you find our outsider perspective as transit advocates useful as you update the Investment Plan. We think very differently than do the agencies lining up to receive Cap and Trade funding from the Greenhouse Gas Reduction Fund ("GGRF").

TRANSDEF finds the Transportation and Sustainable Communities section of the Draft Concept Paper naive and overconfident in its assumption that the programs will result in the intended emissions reductions. We fully expect that HSR, for example, will never carry a single passenger. Similarly, one would never know from reading the paper that Sustainable Communities planning, so far, has resulted in increased GHG emissions, due to the regional targets having been set too low.

The Politicization of Infrastructure Project Selection

Science v. Politics  
ARB's efforts to reduce the GHG emissions from motor vehicles must start with the recognition that transportation is an intensely politicized field. For ARB to successfully shift travel behavior through infrastructure investments, it must stand on its scientific credibility to define the greater good, arrayed against powerful forces representing narrow private and public interests. The future of the entire climate change program hangs on ARB's maintaining its credibility.

Pet Projects  
As Thomas Rubin, a 40-year senior transit manager and consultant wrote "While I have never been a big fan of cap-and-trade, when the purpose was very clearly stated as
funding programs that would have a significant beneficial impact on GHG emissions in the short term, at least there was a conceptual justification. However, given that this promise to the voters has been completely ignored and bypassed so that various politico’s – led by our Governor – can fund their favorite projects, it is increasingly obvious that this has become nothing more than a new tax, mainly for pork projects, with climate change only an excuse that keeps being mouthed to the general public, but ignored when it is time to spread the money around.°(personal communication)

Legal Challenges
ARB must scrupulously resist pressures to substitute political judgments for scientific judgments. The agency needs to take this issue of politicization very seriously, as challenges to the legitimacy of decisions on the use of cap and trade funds are being litigated now in *Morning Star Packing Co. v. California Air Resources Board*, No. C075954 and *TRANSDEF v. California Air Resources Board* No. 34-2014-8001974. TRANSDEF see its role here as intervening to protect the scientific mission of the agency from distortions imposed by political pressure. In our case, the Board Chair endorsed a deeply flawed GHG analysis by the California High-Speed Rail Authority. Because there are no further studies in the record, we conclude this to have been an obviously political decision.

Institutional Resistance
California's institutions are not working together in the interest of reducing transportation's climate impacts. We see profound resistance to change to the status quo by agencies, development interests, construction unions and contractors, not to mention Caltrans. While we are very supportive of what ARB is attempting to do on behalf of the climate, we find the Draft Concept Paper incomplete, due to its underestimation of the depth of resistance. These comments are intended to fill in the missing pieces, to assist ARB in crafting more effective programs.

The SANDAG case now in the Supreme Court is emblematic of agencies willing to say the right thing, but unwilling to actually align their funding plan with their rhetoric. They continue to devote their resources to the futile chase to catch up with congestion. If one thing has been learned from the living laboratory that is Los Angeles, it is that there is no way to ameliorate congestion by adding roadway capacity. Just last week, the Los Angeles City Council adopted its Mobility Plan 2035, which is focused on encouraging alternative modes. Many other agencies, however, have not seen the light...

Caltrans and the CTC
While this author assisted in two updates to the CTC's Regional Transportation Plan Guidelines in response to AB 32 and SB 375, the agency remains oblivious of climate change. It continues merrily building highways. Caltrans, under the mandate of SB 391, produced the draft California Transportation Plan 2040, which lays out a plan to achieve the State's 2050 emissions reduction goals. However, the Caltrans Districts are all business-as-usual, not recognizing the fundamental truth that the more pavement there is, the more people's mode choices will default to driving alone. This is exactly the wrong direction for our State.
Resistance is so strong that the Governor's leadership is very much needed. There has to be a very public sense of mobilization on behalf of the climate.

Application Fraud
TRANSDEF's 8/13/15 comments on the Draft GGRF Funding Guidelines are hereby incorporated by reference. That letter identifies our concerns about the capital misallocation that will result from an infrastructure project selection process that has not been adequately depoliticized. The gap between poorly conceived infrastructure proposals ("pet projects") and a seemingly objective project selection process is bridged by the consulting industry. It is their job to make their clients' projects appear plausible and cost-effective, no matter what the reality is. Our letter calls for ARB to promote a sea change in consultants' professional ethics through very strong disincentives for inflating emissions reduction estimates in grant applications.

The Metropolitan Transportation Commission offers a strong object lesson in what can go wrong in project selection. MTC so politicized its allocating of many billions of dollars in capital that after 30 years of building transit systems, regional transit ridership is actually lower now! Bloated projects hoovered up all available cash, without doing much for ridership. Due to substantial population growth, per capita transit ridership is now dramatically lower. Attached to the earlier letter is our case study for the State Transportation Agency: "Politics Trumps Outcomes at MTC." MTC is a textbook example of the rule that "The worst projects get funded." This endemic problem will plague the GGRF unless vigorous actions are taken to change the culture of consulting.

Policy Decisions Affecting GGRF Transportation Programs

While we see politicization as the number one issue affecting program effectiveness, there are ancillary factors affecting the transportation world that must be understood, or the emissions reductions achievements will be neutralized. While these aren't specifically part of an Investment Plan, they form its critical context.

When Do We Start Reducing For Real?
A huge unanswered question in transportation is "When will agencies finally have to set aside their backlogs of capacity-building projects, and get with the climate change program?" ARB needs to engage in the creation of a date certain, after which agencies are required to analyze such projects from a climate change perspective. Agencies use Committed Projects policies ("If it was in the last RTP, we don't reevaluate it--it automatically goes into the next RTP") as a means of locking in the status quo. The profound changes in state policy make such projects counterproductive to reducing VMT and GHGs. Rescinding committed projects policies should be a requirement of receiving GGRF funding.

Sales Taxes
Congestion management agencies adopting sales tax expenditure plans continue to act like they've never heard of SB 375. Alameda County passed a sales tax that facilitated a 35% increase in VMT, and then had the gall to claim an overall decrease in GHG emissions (Scoping Plan emissions reductions outweighed local emissions increases
from VMT growth). Of course, the whole point of SB 375 was to achieve emissions reductions on top of Scoping Plan measures.

Because sales taxes now make up roughly half of all transportation funding in the State, it is critical for the State to establish legal requirements that local plans be consistent with State policy. Otherwise, local jurisdictions will undo all the good work done by ARB in reducing emissions to meet the 2035 and 2050 targets. Because many sales taxes are planned for the November 2016 Presidential election, and because these taxes will lock in project lists for at least 20 years, it is critical that the State act quickly to prevent another crop of VMT-increasing taxes.

**Locomotive Emissions**
ARB could play a useful role in USEPA regulation of diesel locomotives. Currently, older locomotives can be completely rebuilt and the brand-new locomotive will still be considered exempt from Tier 4 regulations. There is no excuse for the resulting excessive PM emissions--they interfere with the State's black carbon SLCP program.

**Freight Movement**
The adequacy of roadway capacity for trucks and the emissions from congestion would disappear as an issue if the industry could be persuaded to shift all or most of its operations in metropolitan areas to nighttime.

**Transportation and Sustainable Communities Section of the Draft Concept Paper**

**System Efficiency**
For transportation programs, please use a different phrase than System Efficiency. This is a phrase Caltrans has long used the phrase as a euphemism for the adding of highway capacity. Using faulty emissions models that ignore the inducement of new demand, it is claimed that increasing capacity causes reduced congestion and reduced emissions. It should be retired, along with the engineers that can't acknowledge the need to reduce VMT.

**High-Speed Rail**
High-Speed Rail (HSR) is an aberrant part of the Scoping Plan. Unlike all its other measures, there is no scientific analysis of the claimed HSR emissions reductions, other than a self-serving report that omits major sources of emissions. In its place are glowing testimonials from high State officials, including the Board's Chair. Clearly, HSR is a GHG emissions reduction measure on orders from the Governor. There is no scientific justification for providing GGRF funding to the HSR project. TRANSDEF is currently in litigation with ARB on this issue.

**Hydrogen Fuel Cell Vehicles**
TRANSDEF continues to be dubious about the relative benefits of the hydrogen fuel cell path to powering vehicles, when compared with the battery path. It requires building an entirely new distribution network at tremendous cost. The electric grid is already in place and its upgrade costs can be piggybacked upon. In the absence of a head-to-head comparison of life cycle system costs, we are can only see this program as a quaint holdover from a former Governor.
Electric Vehicles
Rebates will continue to be needed to support the increase in electric vehicle market share, until the adjusted prices for these vehicles are roughly similar to those for gas vehicles. The adjustment is the subtraction of the cost differential between gasoline at $4.00 a gallon and electricity at the CEC estimated price, for the life of the battery.

We continue to be dubious as to the need for public investment in charging stations. Regulations calling for the provision of conduit stubs in newly constructed residential parking should provide a cost-effective pathway for the future installation of charging at home, the location where we expect the vast percentage of charging will be done. Spending public dollars on charging stations has to be based on more than countering "range anxiety." Unless data prove otherwise, we will continue to believe that families will purchase EVs as second cars for commuting, where the range is well-known and planned for, eliminating the anxiety. Long-distance trips in EVs will be relatively rare, necessitating a lower public investment in charging than now contemplated.

Connected Vehicles
Congestion is caused by an overabundance of automobiles, in which most have only one occupant. Solo driving is such a fundamental part of life in this county that the question is never raised as to whether congestion should be reduced by encouraging more carpooling. The standard thinking is "We need more pavement..." From the perspective of economics, this is nothing short of insane.

The congested conditions for which Connected Vehicles were developed are the result of solo driving. The technology assumes a policy framework of unquestioning support for solo driving. Autonomous vehicles will increase dependence on the drive-alone (driven-alone?) vehicle. Potentially very large private and public investments need to be considered in the context of expected large increases in VMT, GHG and congestion.

Sustainable Communities
The single most important thing that can be done to increase emissions reductions from Sustainable Communities would be to increase the regional GHG emissions reduction targets to make them actually generate reductions. While the decision to set regional GHG targets on a per capita basis is understandable, it is not understandable that the adopted targets were lower than the projected rate of population growth, guaranteeing that compliance with the targets would result in an overall increase in GHG emissions. ARB bowed to the resistance of the MPOs in neutering the regional targets. ARB must not allow the MPOs to continue to drag their heels.

The development and planning professions have never done Transit-Oriented Development before, and the planning of recent projects shows that. Densities are too low, parking ratios are too high and transit service is inadequate to support a significant mode shift. ARB and its sister agencies need to step up their game, to ensure sufficient oversight is put in place to make sure investments in Sustainable Communities result in actual mode shift and emissions reductions.
The Other Sections of the Draft Concept Paper

Our comments on the other two sectors are brief. We appreciate and support the renewable energy and efficiency programs. California has been a leader in this field, much to its credit. Past accomplishments have contributed to the state's economic success. We remain sceptical, however, of carbon capture and sequestration, and urge caution in evaluating the longevity of underground CO$_2$ trapping. Chemical bonding to rock would be far more reliable than a mechanical seal, with its attendant vulnerabilities.

We strongly support the Short-Lived Climate Pollutant program, including subsidies for change-out of high-GWP commercial refrigeration equipment. The potential for large, early GHG emissions reductions suggests this program should receive a heavy priority.

We support the draft investment concepts for natural resources and waste diversion. We suggest that it should be easy for a landowner to secure benefits from carbon allowances in exchange for verifiable carbon sequestration on the land.

We support the pilot proposal by the CPUC's Denise Tyrrell for Interagency Cooperation for GHG Reduction Local Government Programs. We are struck by the innovative thinking here in recognizing the inefficiency of siloed programs requiring local governments to file multiple applications in closely related fields connected to GHG reductions. That is not an optimal way to manage programs. Please include the pilot in the Plan.

Conclusion

TRANSDEF recognizes the difficulties faced by ARB in investing the GGRF to achieve optimal outcomes. The rest of the world is watching what you do. As Flyvbjerg wrote, "Never has it been more important to choose the most fitting projects and get their economic, social, and environmental impacts right."

We appreciate this opportunity to comment on the draft Concept Paper. We would be pleased to assist in the implementation of these ideas.

Sincerely,

/s/ DAVID SCHONBRUNN

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President
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